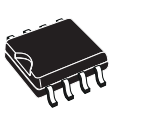
查询KF120B供应商

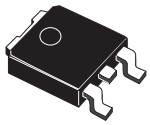
KF00 SERIES

VERY LOW DROP VOLTAGE REGULATORS WITH INHIBIT

- VERY LOW DROPOUT VOLTAGE (0.4V)
- VERY LOW QUIESCENT CURRENT (TYP. 50 µA IN OFF MODE, 500 µA IN ON MODE)
- OUTPUT CURRENT UP TO 500 mA
- LOGIC-CONTROLLED ELECTRONIC SHUTDOWN
- OUTPUT VOLTAGES OF 1.25; 1.5; 2.5; 2.7; 3; 3.3; 3.5; 4; 4.5; 4.7; 5; 5.2; 5.5; 6; 8; 8.5; 12V
- INTERNAL CURRENT AND THERMAL LIMIT
- ONLY 2.2 µF FOR STABILITY
- AVAILABLE IN ± 2% ACCURACY AT 25 °C
- SUPPLY VOLTAGE REJECTION: 70 db (TYP.)
- TEMPERATURE RANGE: -40 TO 125 °C



SO-8

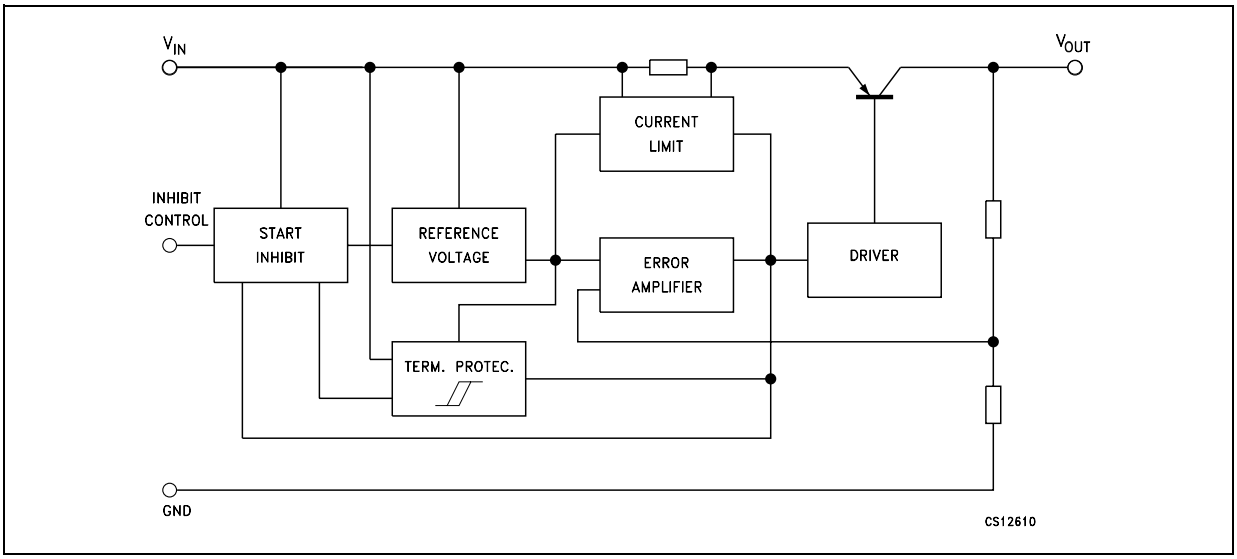


DPAK

DESCRIPTION

The KF00 series are very Low Drop regulators availablein SO-8 package and in a wide range of output voltages.
The very Low Drop voltage (0.4V) and the very low quiescent current make them particularly suitable for Low Noise, Low Power applications and specially in battery powered systems.
A Shutdown Logic Control function is available (pin 5, TTL compatible). This means that when the device is used as a local regulator, it is possible to put a part of the board in standby, decreasing the total power consumption. It requires only a 2.2 µF capacitor for stability allowing space and cost saving.

SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

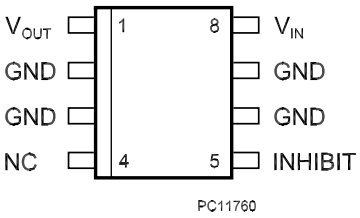
Symbol	Parameter	Value	Unit
V_I	DC Input Voltage	-0.5 to 20	V
I_O	Output Current	Internally Limited	
P_{tot}	Power Dissipation	Internally Limited	
T_{stg}	Storage Temperature Range	-40 to 150	°C
T_{op}	Operating Junction Temperature Range	-40 to 125	°C

Absolute Maximum Ratings are those values beyond which damage to the device may occur. Functional operation under these condition is not implied.

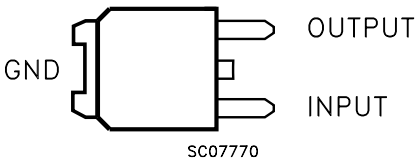
THERMAL DATA

Symbol	Parameter	DPAK	SO-8	Unit
$R_{thj\text{-}case}$	Thermal Resistance Junction-case	8	20	°C/W

CONNECTION DIAGRAM (top view)



SO-8



DPAK

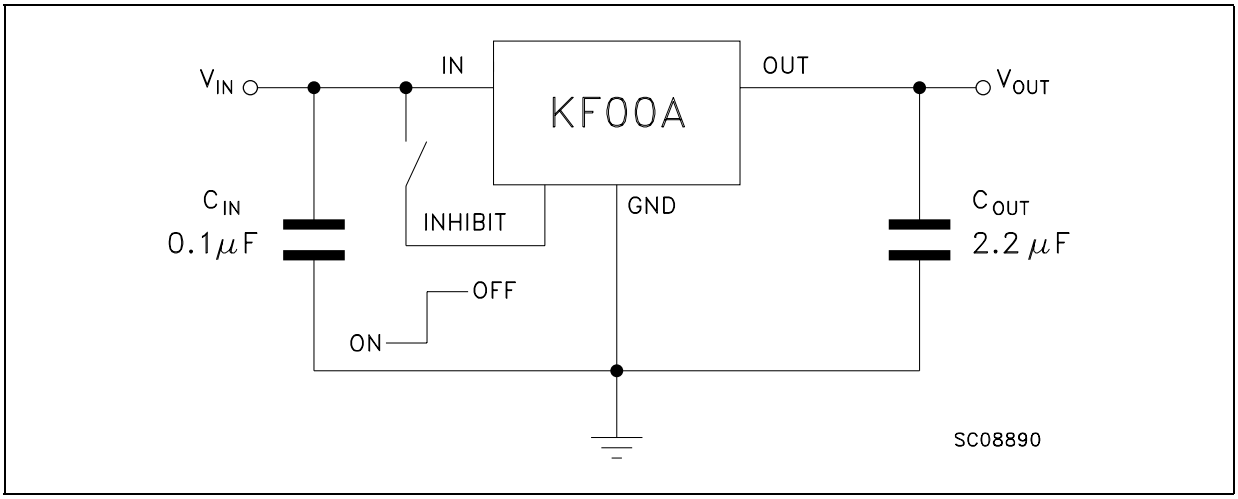
ORDERING CODES

TYPE	SO-8(#)	DPAK(#)	OUTPUT VOLTAGE
KF12(*)	KF12BD	KF12BDT	1.25 V
KF15	KF15BD	KF15BDT	1.5 V
KF25	KF25BD	KF25BDT	2.5 V
KF27	KF27BD	KF27BDT	2.7 V
KF30	KF30BD	KF30BDT	3 V
KF33	KF33BD	KF33BDT	3.3 V
KF35	KF35BD	KF35BDT	3.5 V
KF40	KF40BD	KF40BDT	4 V
KF45(*)	KF45BD	KF45BDT	4.5 V
KF47	KF47BD	KF47BDT	4.75 V
KF50	KF50BD	KF50BDT	5 V
KF52	KF52BD	KF52BDT	5.2 V
KF55(*)	KF55BD	KF55BDT	5.5 V
KF60	KF60BD	KF60BDT	6 V
KF80	KF80BD	KF80BDT	8 V
KF85	KF85BD	KF85BDT	8.5 V
KF120	KF120BD	KF120BDT	12 V

(*) Available on request.

(#) Available in Tape & Reel with the suffix "-TR".

TEST CIRCUITS



ELECTRICAL CHARACTERISTICS FOR KF12 (refer to the test circuits, T_j = 25°C, C_I = 0.1 µF, C_O = 2.2 µF unless otherwise specified.)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 50 mA, V_I = 3.3 V		1.225	1.25	1.275	V
		I_O = 50 mA, V_I = 3.3 V, T_a = -25 to 85°C		1.2		1.3	
V_I	Operating Input Voltage	I_O = 500 mA		2.5		20	V
I_O	Output Current Limit				1		A
ΔV_O	Line Regulation	V_I = 2.5 to 20 V, I_O = 5 mA			2	12	mV
ΔV_O	Load Regulation	V_I = 2.8 V, I_O = 5 to 500 mA			2	50	mV
I_d	Quiescent Current	V_I = 2.5 to 20V, I_O = 0mA	(ON MODE)		0.5	1	mA
		V_I = 2.6 to 20V, I_O = 500mA				12	
		V_I = 6 V	(OFF MODE)		50	100	µA
SVR	Supply Voltage Rejection	I_O = 5 mA, V_I = 3.5 ± 1 V	f = 120 Hz		82		dB
			f = 1 KHz		77		
			f = 10 KHz		60		
eN	Output Noise Voltage	B = 10 Hz to 100 KHz			50		µV
V_d	Dropout Voltage	I_O = 200 mA			1.25		V
V_{IL}	Control Input Logic Low	T_a = -40 to 125°C				0.8	V
V_{IH}	Control Input Logic High	T_a = -40 to 125°C		2			V
I_I	Control Input Current	V_I = 6 V, V_C = 6 V			10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_O = 0 to 500 mA		2	10		µF

ELECTRICAL CHARACTERISTICS FOR KF15 (refer to the test circuits, T_j = 25°C, C_I = 0.1 µF, C_O = 2.2 µF unless otherwise specified.)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 50 mA, V_I = 3.5 V		1.47	1.5	1.53	V
		I_O = 50 mA, V_I = 3.5 V, T_a = -25 to 85°C		1.44		1.56	
V_I	Operating Input Voltage	I_O = 500 mA		2.5		20	V
I_O	Output Current Limit				1		A
ΔV_O	Line Regulation	V_I = 2.5 to 20 V, I_O = 5 mA			2	12	mV
ΔV_O	Load Regulation	V_I = 2.8 V, I_O = 5 to 500 mA			2	50	mV
I_d	Quiescent Current	V_I = 2.5 to 20V, I_O = 0mA	(ON MODE)		0.5	1	mA
		V_I = 2.8 to 20V, I_O = 500mA				12	
		V_I = 6 V	(OFF MODE)		50	100	µA
SVR	Supply Voltage Rejection	I_O = 5 mA, V_I = 3.5 ± 1 V	f = 120 Hz		82		dB
			f = 1 KHz		77		
			f = 10 KHz		60		
eN	Output Noise Voltage	B = 10 Hz to 100 KHz			50		µV
V_d	Dropout Voltage	I_O = 200 mA			1		V
V_{IL}	Control Input Logic Low	T_a = -40 to 125°C				0.8	V
V_{IH}	Control Input Logic High	T_a = -40 to 125°C		2			V
I_I	Control Input Current	V_I = 6 V, V_C = 6 V			10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_O = 0 to 500 mA		2	10		µF

ELECTRICAL CHARACTERISTICS FOR KF25 (refer to the test circuits, T_j = 25°C, C_I = 0.1 µF, C_O = 2.2 µF unless otherwise specified.)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 50 mA, V_I = 4.5 V		2.45	2.5	2.55	V
		I_O = 50 mA, V_I = 4.5 V, T_a = -25 to 85°C		2.4		2.6	
V_I	Operating Input Voltage	I_O = 500 mA				20	V
I_O	Output Current Limit				1		A
ΔV_O	Line Regulation	V_I = 3.5 to 20 V, I_O = 5 mA			2	12	mV
ΔV_O	Load Regulation	V_I = 3.8 V, I_O = 5 to 500 mA			2	50	mV
I_d	Quiescent Current	V_I = 3.5 to 20V, I_O = 0mA	(ON MODE)		0.5	1	mA
		V_I = 3.8 to 20V, I_O = 500mA				12	
		V_I = 6 V	(OFF MODE)		50	100	µA
SVR	Supply Voltage Rejection	I_O = 5 mA, V_I = 4.5 ± 1 V	f = 120 Hz		82		dB
			f = 1 KHz		77		
			f = 10 KHz		60		
eN	Output Noise Voltage	B = 10 Hz to 100 KHz			50		µV
V_d	Dropout Voltage	I_O = 200 mA			0.2	0.35	V
		I_O = 500 mA			0.4	0.7	
V_{IL}	Control Input Logic Low	T_a = -40 to 125°C				0.8	V
V_{IH}	Control Input Logic High	T_a = -40 to 125°C		2			V
I_I	Control Input Current	V_I = 6 V, V_C = 6 V			10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_O = 0 to 500 mA		2	10		µF

ELECTRICAL CHARACTERISTICS FOR KF27 (refer to the test circuits, T_j = 25°C, C_I = 0.1 µF, C_O = 2.2 µF unless otherwise specified.)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 50 mA, V_I = 4.7 V		2.646	2.7	2.754	V
		I_O = 50 mA, V_I = 4.7 V, T_a = -25 to 85°C		2.592		2.808	
V_I	Operating Input Voltage	I_O = 500 mA				20	V
I_O	Output Current Limit				1		A
ΔV_O	Line Regulation	V_I = 3.7 to 20 V, I_O = 5 mA			2	12	mV
ΔV_O	Load Regulation	V_I = 4 V, I_O = 5 to 500 mA			2	50	mV
I_d	Quiescent Current	V_I = 3.7 to 20V, I_O = 0mA	(ON MODE)		0.5	1	mA
		V_I = 4 to 20V, I_O = 500mA				12	
		V_I = 6 V	(OFF MODE)		50	100	µA
SVR	Supply Voltage Rejection	I_O = 5 mA, V_I = 4.7 ± 1 V	f = 120 Hz		82		dB
			f = 1 KHz		77		
			f = 10 KHz		60		
eN	Output Noise Voltage	B = 10 Hz to 100 KHz			50		µV
V_d	Dropout Voltage	I_O = 200 mA			0.2	0.35	V
		I_O = 500 mA			0.4	0.7	
V_{IL}	Control Input Logic Low	T_a = -40 to 125°C				0.8	V
V_{IH}	Control Input Logic High	T_a = -40 to 125°C		2			V
I_I	Control Input Current	V_I = 6 V, V_C = 6 V			10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω, I_O = 0 to 500 mA		2	10		µF

ELECTRICAL CHARACTERISTICS FOR KF30 (refer to the test circuits, T_j = 25°C, C_I = 0.1 µF, C_O = 2.2 µF unless otherwise specified.)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 50 mA, V_I = 5 V		2.94	3	3.06	V
		I_O = 50 mA, V_I = 5 V, T_a = -25 to 85°C		2.88		3.12	
V_I	Operating Input Voltage	I_O = 500 mA				20	V
I_O	Output Current Limit				1		A
ΔV_O	Line Regulation	V_I = 4 to 20 V, I_O = 5 mA			2	12	mV
ΔV_O	Load Regulation	V_I = 4.3 V, I_O = 5 to 500 mA			2	50	mV
I_d	Quiescent Current	V_I = 4 to 20V, I_O = 0mA	(ON MODE)		0.5	1	mA
		V_I = 4.3 to 20V, I_O = 500mA				12	
		V_I = 6 V	(OFF MODE)		50	100	µA
SVR	Supply Voltage Rejection	I_O = 5 mA, V_I = 5 ± 1 V	f = 120 Hz		81		dB
			f = 1 KHz		76		
			f = 10 KHz		60		
eN	Output Noise Voltage	B = 10 Hz to 100 KHz			50		µV
V_d	Dropout Voltage	I_O = 200 mA			0.2	0.35	V
		I_O = 500 mA			0.4	0.7	
V_{IL}	Control Input Logic Low	T_a = -40 to 125°C				0.8	V
V_{IH}	Control Input Logic High	T_a = -40 to 125°C		2			V
I_I	Control Input Current	V_I = 6 V, V_C = 6 V			10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω, I_O = 0 to 500 mA		2	10		µF

ELECTRICAL CHARACTERISTICS FOR KF33 (refer to the test circuits, T_j = 25°C, C_I = 0.1 µF, C_O = 2.2 µF unless otherwise specified.)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 50 mA, V_I = 5.3 V		3.234	3.3	3.366	V
		I_O = 50 mA, V_I = 5.3 V, T_a = -25 to 85°C		3.168		3.432	
V_I	Operating Input Voltage	I_O = 500 mA				20	V
I_O	Output Current Limit				1		A
ΔV_O	Line Regulation	V_I = 4.3 to 20 V, I_O = 5 mA			2	12	mV
ΔV_O	Load Regulation	V_I = 4.6 V, I_O = 5 to 500 mA			2	50	mV
I_d	Quiescent Current	V_I = 4.3 to 20V, I_O = 0mA	(ON MODE)		0.5	1	mA
		V_I = 4.6 to 20V, I_O = 500mA				12	
		V_I = 6 V	(OFF MODE)		50	100	µA
SVR	Supply Voltage Rejection	I_O = 5 mA, V_I = 5.3 ± 1 V	f = 120 Hz		80		dB
			f = 1 KHz		75		
			f = 10 KHz		60		
eN	Output Noise Voltage	B = 10 Hz to 100 KHz			50		µV
V_d	Dropout Voltage	I_O = 200 mA			0.2	0.35	V
		I_O = 500 mA			0.4	0.7	
V_{IL}	Control Input Logic Low	T_a = -40 to 125°C				0.8	V
V_{IH}	Control Input Logic High	T_a = -40 to 125°C		2			V
I_I	Control Input Current	V_I = 6 V, V_C = 6 V			10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_O = 0 to 500 mA		2	10		µF

ELECTRICAL CHARACTERISTICS FOR KF35 (refer to the test circuits, T_j = 25°C, C_I = 0.1 µF, C_O = 2.2 µF unless otherwise specified.)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 50 mA, V_I = 5.5 V		3.43	3.5	3.57	V
		I_O = 50 mA, V_I = 5.5 V, T_a = -25 to 85°C		3.36		3.64	
V_I	Operating Input Voltage	I_O = 500 mA				20	V
I_O	Output Current Limit				1		A
ΔV_O	Line Regulation	V_I = 4.5 to 20 V, I_O = 5 mA			2	12	mV
ΔV_O	Load Regulation	V_I = 4.8 V, I_O = 5 to 500 mA			2	50	mV
I_d	Quiescent Current	V_I = 4.5 to 20V, I_O = 0mA	(ON MODE)		0.5	1	mA
		V_I = 4.8 to 20V, I_O = 500mA				12	
		V_I = 6 V	(OFF MODE)		50	100	µA
SVR	Supply Voltage Rejection	I_O = 5 mA, V_I = 5.5 ± 1 V	f = 120 Hz		79		dB
			f = 1 KHz		74		
			f = 10 KHz		60		
eN	Output Noise Voltage	B = 10 Hz to 100 KHz			50		µV
V_d	Dropout Voltage	I_O = 200 mA			0.2	0.35	V
		I_O = 500 mA			0.4	0.7	
V_{IL}	Control Input Logic Low	T_a = -40 to 125°C				0.8	V
V_{IH}	Control Input Logic High	T_a = -40 to 125°C		2			V
I_I	Control Input Current	V_I = 6 V, V_C = 6 V			10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_O = 0 to 500 mA		2	10		µF

ELECTRICAL CHARACTERISTICS FOR KF40 (refer to the test circuits, T_j = 25°C, C_I = 0.1 µF, C_O = 2.2 µF unless otherwise specified.)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 50 mA, V_I = 6 V		3.92	4	4.08	V
		I_O = 50 mA, V_I = 6 V, T_a = -25 to 85°C		3.84		4.16	
V_I	Operating Input Voltage	I_O = 500 mA				20	V
I_O	Output Current Limit				1		A
ΔV_O	Line Regulation	V_I = 5 to 20 V, I_O = 5 mA			3	18	mV
ΔV_O	Load Regulation	V_I = 5.3 V, I_O = 5 to 500 mA			2	50	mV
I_d	Quiescent Current	V_I = 5 to 20V, I_O = 0mA	(ON MODE)		0.5	1	mA
		V_I = 5.3 to 20V, I_O = 500mA				12	
		V_I = 6 V	(OFF MODE)		50	100	µA
SVR	Supply Voltage Rejection	I_O = 5 mA, V_I = 6 ± 1 V	f = 120 Hz		78		dB
			f = 1 KHz		73		
			f = 10 KHz		60		
eN	Output Noise Voltage	B = 10 Hz to 100 KHz			50		µV
V_d	Dropout Voltage	I_O = 200 mA			0.2	0.35	V
		I_O = 500 mA			0.4	0.7	
V_{IL}	Control Input Logic Low	T_a = -40 to 125°C				0.8	V
V_{IH}	Control Input Logic High	T_a = -40 to 125°C		2			V
I_I	Control Input Current	V_I = 6 V, V_C = 6 V			10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_O = 0 to 500 mA		2	10		µF

ELECTRICAL CHARACTERISTICS FOR KF45 (refer to the test circuits, T_j = 25°C, C_I = 0.1 µF, C_O = 2.2 µF unless otherwise specified.)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 50 mA, V_I = 6.5 V		4.41	4.5	4.59	V
		I_O = 50 mA, V_I = 6.5 V, T_a = -25 to 85°C		4.32		4.68	
V_I	Operating Input Voltage	I_O = 500 mA				20	V
I_O	Output Current Limit				1		A
ΔV_O	Line Regulation	V_I = 5.5 to 20 V, I_O = 5 mA			3	18	mV
ΔV_O	Load Regulation	V_I = 5.8 V, I_O = 5 to 500 mA			2	50	mV
I_d	Quiescent Current	V_I = 5.5 to 20V, I_O = 0mA	(ON MODE)		0.5	1	mA
		V_I = 5.8 to 20V, I_O = 500mA				12	
		V_I = 6 V	(OFF MODE)		50	100	µA
SVR	Supply Voltage Rejection	I_O = 5 mA, V_I = 6.5 ± 1 V	f = 120 Hz		77		dB
			f = 1 KHz		72		
			f = 10 KHz		60		
eN	Output Noise Voltage	B = 10 Hz to 100 KHz			50		µV
V_d	Dropout Voltage	I_O = 200 mA			0.2	0.35	V
		I_O = 500 mA			0.4	0.7	
V_{IL}	Control Input Logic Low	T_a = -40 to 125°C				0.8	V
V_{IH}	Control Input Logic High	T_a = -40 to 125°C		2			V
I_I	Control Input Current	V_I = 6 V, V_C = 6 V			10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_O = 0 to 500 mA		2	10		µF

ELECTRICAL CHARACTERISTICS FOR KF47 (refer to the test circuits, T_j = 25°C, C_I = 0.1 µF, C_O = 2.2 µF unless otherwise specified.)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 50 mA, V_I = 6.7 V		4.606	4.7	4.794	V
		I_O = 50 mA, V_I = 6.7 V, T_a = -25 to 85°C		4.512		4.888	
V_I	Operating Input Voltage	I_O = 500 mA				20	V
I_O	Output Current Limit				1		A
ΔV_O	Line Regulation	V_I = 5.7 to 20 V, I_O = 5 mA			3	18	mV
ΔV_O	Load Regulation	V_I = 6 V, I_O = 5 to 500 mA			2	50	mV
I_d	Quiescent Current	V_I = 5.7 to 20V, I_O = 0mA	(ON MODE)		0.5	1	mA
		V_I = 6 to 20V, I_O = 500mA				12	
		V_I = 6 V	(OFF MODE)		50	100	µA
SVR	Supply Voltage Rejection	I_O = 5 mA, V_I = 6.7 ± 1 V	f = 120 Hz		77		dB
			f = 1 KHz		72		
			f = 10 KHz		60		
eN	Output Noise Voltage	B = 10 Hz to 100 KHz			50		µV
V_d	Dropout Voltage	I_O = 200 mA			0.2	0.35	V
		I_O = 500 mA			0.4	0.7	
V_{IL}	Control Input Logic Low	T_a = -40 to 125°C				0.8	V
V_{IH}	Control Input Logic High	T_a = -40 to 125°C		2			V
I_I	Control Input Current	V_I = 6 V, V_C = 6 V			10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_O = 0 to 500 mA		2	10		µF

ELECTRICAL CHARACTERISTICS FOR KF50 (refer to the test circuits, T_j = 25°C, C_I = 0.1 µF, C_O = 2.2 µF unless otherwise specified.)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 50 mA, V_I = 7 V		4.9	5	5.1	V
		I_O = 50 mA, V_I = 7 V, T_a = -25 to 85°C		4.8		5.2	
V_I	Operating Input Voltage	I_O = 500 mA				20	V
I_O	Output Current Limit				1		A
ΔV_O	Line Regulation	V_I = 6 to 20 V, I_O = 5 mA			3	18	mV
ΔV_O	Load Regulation	V_I = 6.3 V, I_O = 5 to 500 mA			2	50	mV
I_d	Quiescent Current	V_I = 6 to 20V, I_O = 0mA	(ON MODE)		0.5	1	mA
		V_I = 6.3 to 20V, I_O = 500mA				12	
		V_I = 6 V	(OFF MODE)		50	100	µA
SVR	Supply Voltage Rejection	I_O = 5 mA, V_I = 7 ± 1 V	f = 120 Hz		76		dB
			f = 1 KHz		71		
			f = 10 KHz		60		
eN	Output Noise Voltage	B = 10 Hz to 100 KHz			50		µV
V_d	Dropout Voltage	I_O = 200 mA			0.2	0.35	V
		I_O = 500 mA			0.4	0.7	
V_{IL}	Control Input Logic Low	T_a = -40 to 125°C				0.8	V
V_{IH}	Control Input Logic High	T_a = -40 to 125°C		2			V
I_I	Control Input Current	V_I = 6 V, V_C = 6 V			10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_O = 0 to 500 mA		2	10		µF

ELECTRICAL CHARACTERISTICS FOR KF52 (refer to the test circuits, T_j = 25°C, C_I = 0.1 µF, C_O = 2.2 µF unless otherwise specified.)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 50 mA, V_I = 7.2 V		5.096	5.2	5.304	V
		I_O = 50 mA, V_I = 7.2 V, T_a = -25 to 85°C		4.992		5.408	
V_I	Operating Input Voltage	I_O = 500 mA				20	V
I_O	Output Current Limit				1		A
ΔV_O	Line Regulation	V_I = 6.2 to 20 V, I_O = 5 mA			3	18	mV
ΔV_O	Load Regulation	V_I = 6.5 V, I_O = 5 to 500 mA			2	50	mV
I_d	Quiescent Current	V_I = 6.2 to 20V, I_O = 0mA	(ON MODE)		0.5	1	mA
		V_I = 6.5 to 20V, I_O = 500mA				12	
		V_I = 6 V	(OFF MODE)		50	100	µA
SVR	Supply Voltage Rejection	I_O = 5 mA, V_I = 7.2 ± 1 V	f = 120 Hz		76		dB
			f = 1 KHz		71		
			f = 10 KHz		60		
eN	Output Noise Voltage	B = 10 Hz to 100 KHz			50		µV
V_d	Dropout Voltage	I_O = 200 mA			0.2	0.35	V
		I_O = 500 mA			0.4	0.7	
V_{IL}	Control Input Logic Low	T_a = -40 to 125°C				0.8	V
V_{IH}	Control Input Logic High	T_a = -40 to 125°C		2			V
I_I	Control Input Current	V_I = 6 V, V_C = 6 V			10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω, I_O = 0 to 500 mA		2	10		µF

ELECTRICAL CHARACTERISTICS FOR KF55 (refer to the test circuits, T_j = 25°C, C_I = 0.1 µF, C_O = 2.2 µF unless otherwise specified.)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 50 mA, V_I = 7.5 V		5.39	5.5	5.61	V
		I_O = 50 mA, V_I = 7.5 V, T_a = -25 to 85°C		5.28		5.72	
V_I	Operating Input Voltage	I_O = 500 mA				20	V
I_O	Output Current Limit				1		A
ΔV_O	Line Regulation	V_I = 6.5 to 20 V, I_O = 5 mA			3	18	mV
ΔV_O	Load Regulation	V_I = 6.8 V, I_O = 5 to 500 mA			2	50	mV
I_d	Quiescent Current	V_I = 6.5 to 20V, I_O = 0mA	(ON MODE)		0.5	1	mA
		V_I = 6.8 to 20V, I_O = 500mA				12	
		V_I = 6 V	(OFF MODE)		50	100	µA
SVR	Supply Voltage Rejection	I_O = 5 mA, V_I = 7.5 ± 1 V	f = 120 Hz		76		dB
			f = 1 KHz		71		
			f = 10 KHz		60		
eN	Output Noise Voltage	B = 10 Hz to 100 KHz			50		µV
V_d	Dropout Voltage	I_O = 200 mA			0.2	0.35	V
		I_O = 500 mA			0.4	0.7	
V_{IL}	Control Input Logic Low	T_a = -40 to 125°C				0.8	V
V_{IH}	Control Input Logic High	T_a = -40 to 125°C		2			V
I_I	Control Input Current	V_I = 6 V, V_C = 6 V			10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω, I_O = 0 to 500 mA		2	10		µF

ELECTRICAL CHARACTERISTICS FOR KF60 (refer to the test circuits, T_j = 25°C, C_I = 0.1 µF, C_O = 2.2 µF unless otherwise specified.)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 50 mA, V_I = 8 V		5.88	6	6.12	V
		I_O = 50 mA, V_I = 8 V, T_a = -25 to 85°C		5.76		6.24	
V_I	Operating Input Voltage	I_O = 500 mA				20	V
I_O	Output Current Limit				1		A
ΔV_O	Line Regulation	V_I = 7 to 20 V, I_O = 5 mA			4	24	mV
ΔV_O	Load Regulation	V_I = 7.3 V, I_O = 5 to 500 mA			2	50	mV
I_d	Quiescent Current	V_I = 7 to 20V, I_O = 0mA	(ON MODE)		0.7	1.5	mA
		V_I = 7.3 to 20V, I_O = 500mA				12	
		V_I = 9 V	(OFF MODE)		70	140	µA
SVR	Supply Voltage Rejection	I_O = 5 mA, V_I = 8 ± 1 V	f = 120 Hz		75		dB
			f = 1 KHz		70		
			f = 10 KHz		60		
eN	Output Noise Voltage	B = 10 Hz to 100 KHz			50		µV
V_d	Dropout Voltage	I_O = 200 mA			0.2	0.35	V
		I_O = 500 mA			0.4	0.7	
V_{IL}	Control Input Logic Low	T_a = -40 to 125°C				0.8	V
V_{IH}	Control Input Logic High	T_a = -40 to 125°C		2			V
I_I	Control Input Current	V_I = 9 V, V_C = 6 V			10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_O = 0 to 500 mA		2	10		µF

ELECTRICAL CHARACTERISTICS FOR KF80B (refer to the test circuits, T_j = 25°C, C_I = 0.1 µF, C_O = 2.2 µF unless otherwise specified.)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 50 mA, V_I = 10 V		7.84	8	8.16	V
		I_O = 50 mA, V_I = 10 V, T_a = -25 to 85°C		7.68		8.32	
V_I	Operating Input Voltage	I_O = 500 mA				20	V
I_O	Output Current Limit				1		A
ΔV_O	Line Regulation	V_I = 9 to 20 V, I_O = 5 mA			4	24	mV
ΔV_O	Load Regulation	V_I = 9.3 V, I_O = 5 to 500 mA			2	50	mV
I_d	Quiescent Current	V_I = 9 to 20V, I_O = 0mA	(ON MODE)		0.7	1.5	mA
		V_I = 9.3 to 20V, I_O = 500mA				12	
		V_I = 9 V	(OFF MODE)		70	140	µA
SVR	Supply Voltage Rejection	I_O = 5 mA, V_I = 10 ± 1 V	f = 120 Hz		72		dB
			f = 1 KHz		67		
			f = 10 KHz		60		
eN	Output Noise Voltage	B = 10 Hz to 100 KHz			50		µV
V_d	Dropout Voltage	I_O = 200 mA			0.2	0.35	V
		I_O = 500 mA			0.4	0.7	
V_{IL}	Control Input Logic Low	T_a = -40 to 125°C				0.8	V
V_{IH}	Control Input Logic High	T_a = -40 to 125°C		2			V
I_I	Control Input Current	V_I = 9 V, V_C = 6 V			10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_O = 0 to 500 mA		2	10		µF

ELECTRICAL CHARACTERISTICS FOR KF85B (refer to the test circuits, T_j = 25°C, C_I = 0.1 µF, C_O = 2.2 µF unless otherwise specified.)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 50 mA, V_I = 10.5 V		8.33	8.5	8.67	V
		I_O = 50 mA, V_I = 10.5 V, T_a = -25 to 85°C		8.16		8.84	
V_I	Operating Input Voltage	I_O = 500 mA				20	V
I_O	Output Current Limit				1		A
ΔV_O	Line Regulation	V_I = 9.5 to 20 V, I_O = 5 mA			4	24	mV
ΔV_O	Load Regulation	V_I = 9.8 V, I_O = 5 to 500 mA			2	50	mV
I_d	Quiescent Current	V_I = 9.5 to 20V, I_O = 0mA	(ON MODE)		0.7	1.5	mA
		V_I = 9.8 to 20V, I_O = 500mA				12	
		V_I = 10 V	(OFF MODE)		70	140	µA
SVR	Supply Voltage Rejection	I_O = 5 mA, V_I = 10.5 ± 1 V	f = 120 Hz		67		dB
			f = 1 KHz		63		
			f = 10 KHz		53		
eN	Output Noise Voltage	B = 10 Hz to 100 KHz			50		µV
V_d	Dropout Voltage	I_O = 200 mA			0.2	0.35	V
		I_O = 500 mA			0.4	0.7	
V_{IL}	Control Input Logic Low	T_a = -40 to 125°C				0.8	V
V_{IH}	Control Input Logic High	T_a = -40 to 125°C		2			V
I_I	Control Input Current	V_I = 10 V, V_C = 6 V			10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_O = 0 to 500 mA		2	10		µF

ELECTRICAL CHARACTERISTICS FOR KF120B (refer to the test circuits, T_j = 25°C, C_I = 0.1 µF, C_O = 2.2 µF unless otherwise specified.)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 50 mA, V_I = 14 V		11.76	12	12.24	V
		I_O = 50 mA, V_I = 14 V, T_a = -25 to 85°C		11.52		12.48	
V_I	Operating Input Voltage	I_O = 500 mA				20	V
I_O	Output Current Limit				1		A
ΔV_O	Line Regulation	V_I = 13 to 20 V, I_O = 5 mA			8	48	mV
ΔV_O	Load Regulation	V_I = 13.3 V, I_O = 5 to 500 mA			2	50	mV
I_d	Quiescent Current	V_I = 13 to 20V, I_O = 0mA	(ON MODE)		0.7	1.5	mA
		V_I = 13.3 to 20V, I_O = 500mA				12	
		V_I = 13 V	(OFF MODE)		70	140	µA
SVR	Supply Voltage Rejection	I_O = 5 mA, V_I = 14 ± 1 V	f = 120 Hz		69		dB
			f = 1 KHz		64		
			f = 10 KHz		54		
eN	Output Noise Voltage	B = 10 Hz to 100 KHz			50		µV
V_d	Dropout Voltage	I_O = 200 mA			0.2	0.35	V
		I_O = 500 mA			0.4	0.7	
V_{IL}	Control Input Logic Low	T_a = -40 to 125°C				0.8	V
V_{IH}	Control Input Logic High	T_a = -40 to 125°C		2			V
I_I	Control Input Current	V_I = 13 V, V_C = 6 V			10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_O = 0 to 500 mA		2	10		µF

TYPICAL PERFORMANCE CHARACTERISTICS (unless otherwise specified $V_{O(NOM)}$ = 3.3 V)

Figure 1 : Dropout Voltage vs Output Current

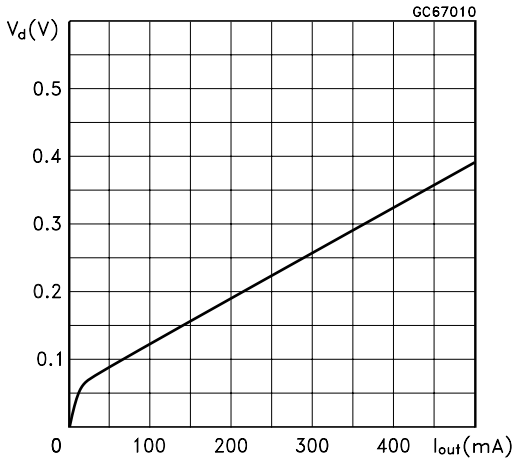


Figure 2 : Dropout Voltage vs Temperature

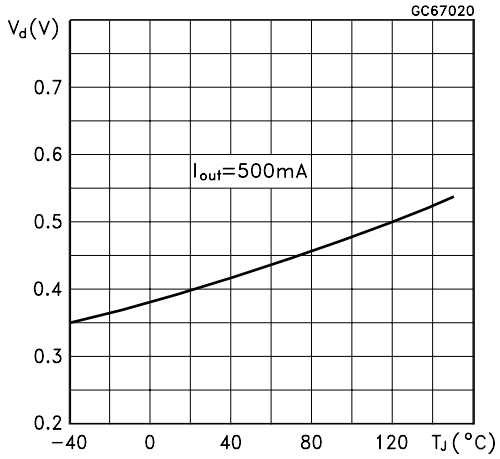


Figure 3 : Supply Current vs Input Voltage

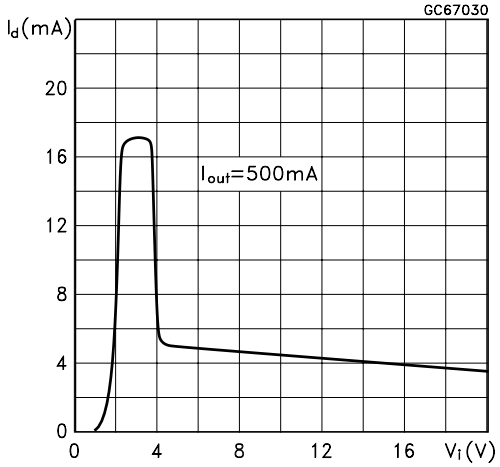


Figure 4 : Supply Current vs Input Voltage

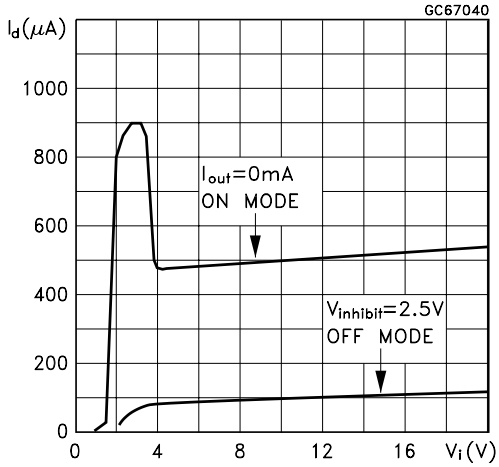


Figure 5 : Short Circuit Current vs Input Voltage

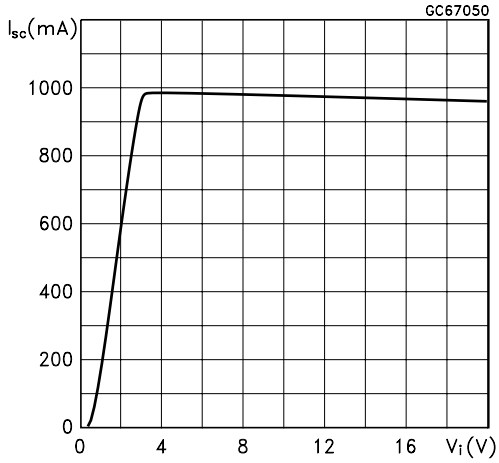
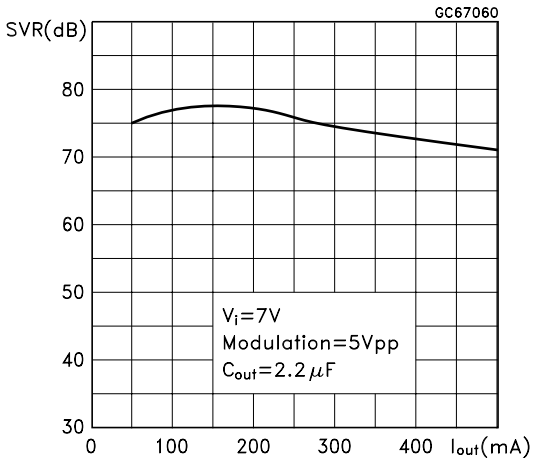
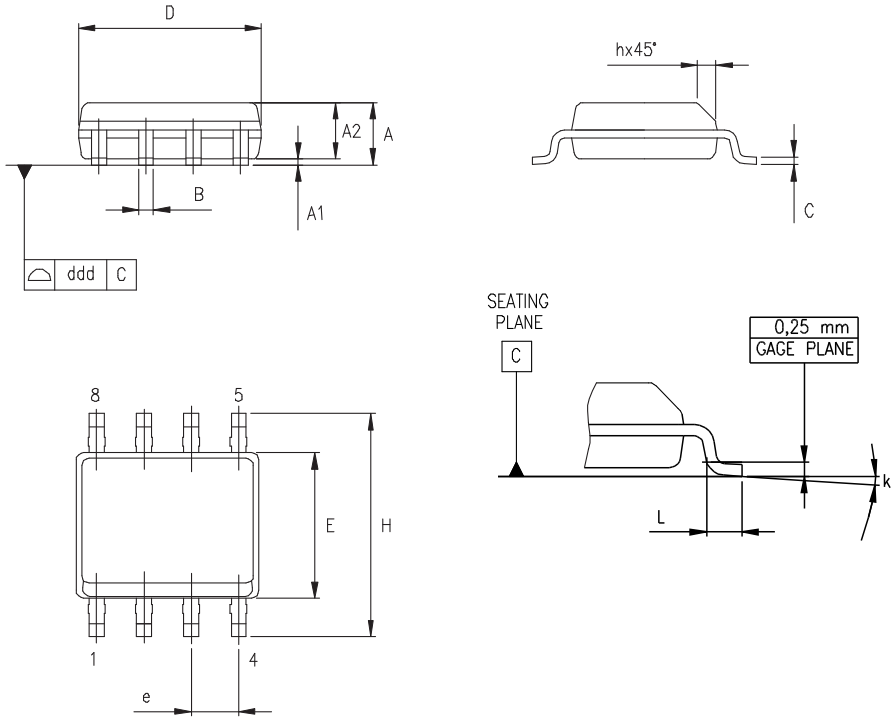


Figure 6 : Supply Voltage Rejection vs Input Voltage



SO-8 MECHANICAL DATA

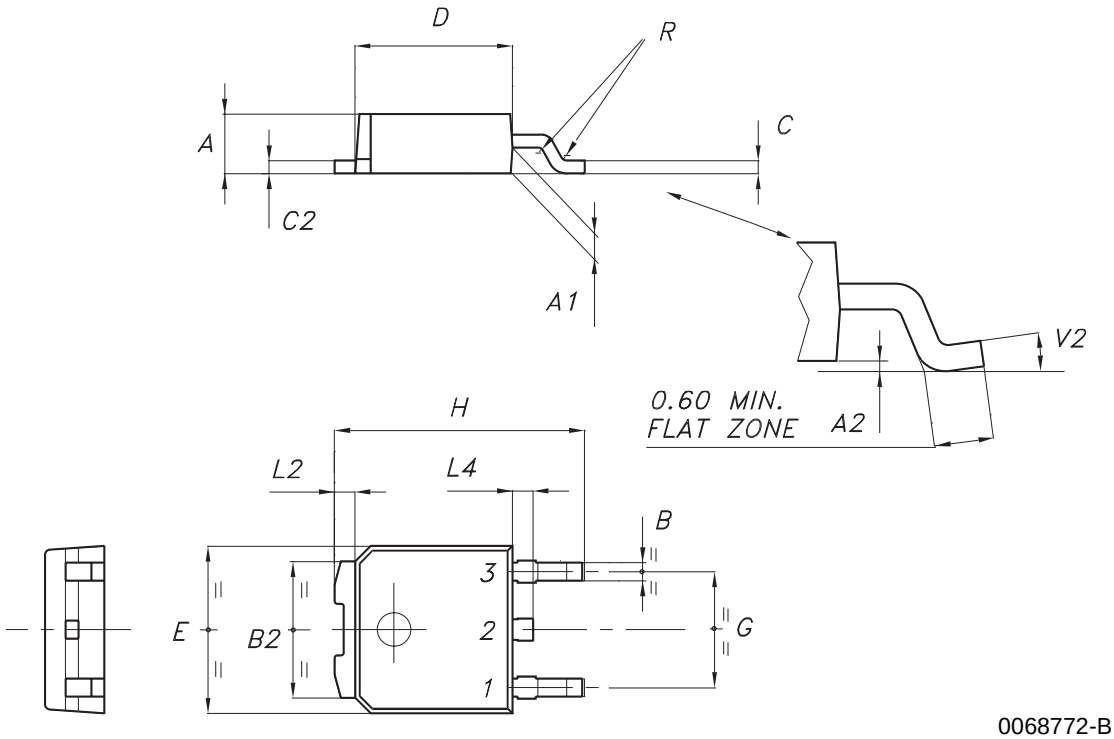
DIM.	mm.			inch		
	MIN.	TYP	MAX.	MIN.	TYP.	MAX.
A	1.35		1.75	0.053		0.069
A1	0.10		0.25	0.04		0.010
A2	1.10		1.65	0.043		0.065
B	0.33		0.51	0.013		0.020
C	0.19		0.25	0.007		0.010
D	4.80		5.00	0.189		0.197
E	3.80		4.00	0.150		0.157
e		1.27			0.050	
H	5.80		6.20	0.228		0.244
h	0.25		0.50	0.010		0.020
L	0.40		1.27	0.016		0.050
k	8° (max.)					
ddd			0.1			0.04



0016023/C

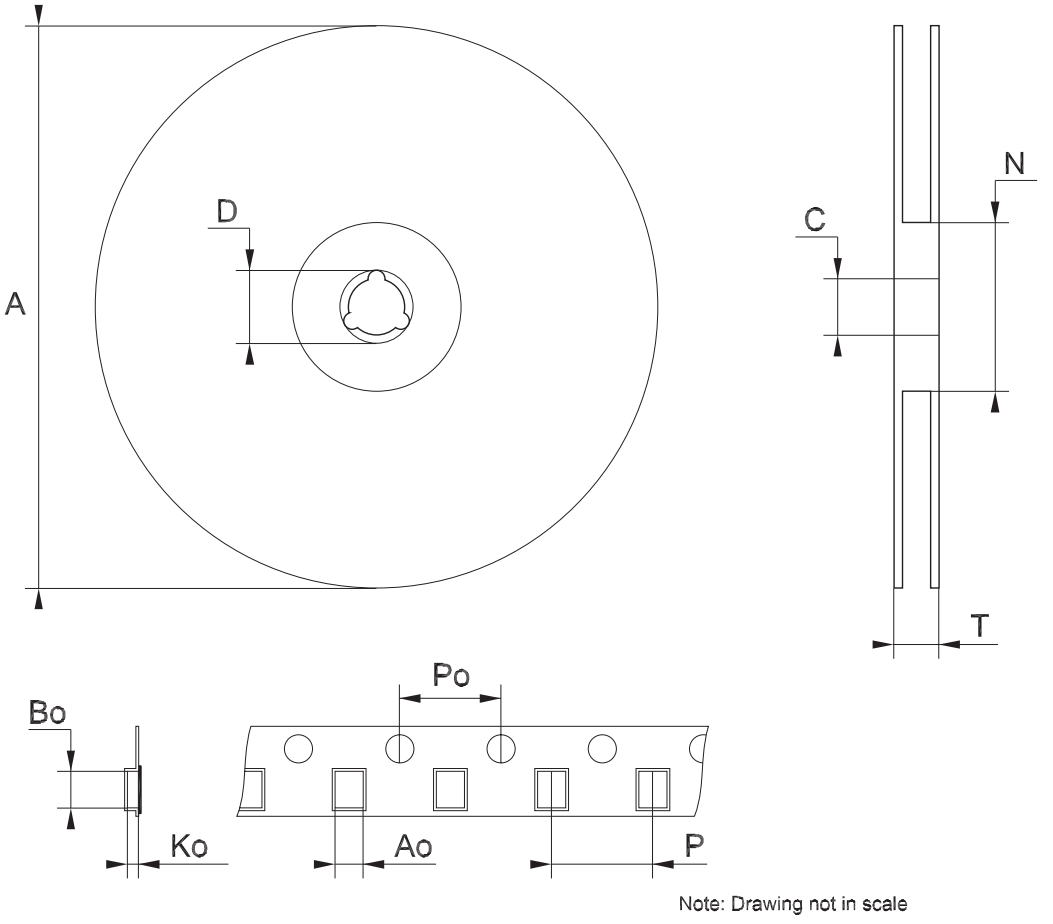
DPAK MECHANICAL DATA

DIM.	mm.			inch		
	MIN.	TYP	MAX.	MIN.	TYP.	MAX.
A	2.2		2.4	0.086		0.094
A1	0.9		1.1	0.035		0.043
A2	0.03		0.23	0.001		0.009
B	0.64		0.9	0.025		0.035
B2	5.2		5.4	0.204		0.212
C	0.45		0.6	0.017		0.023
C2	0.48		0.6	0.019		0.023
D	6		6.2	0.236		0.244
E	6.4		6.6	0.252		0.260
G	4.4		4.6	0.173		0.181
H	9.35		10.1	0.368		0.397
L2		0.8			0.031	
L4	0.6		1	0.023		0.039



Tape & Reel SO-8 MECHANICAL DATA

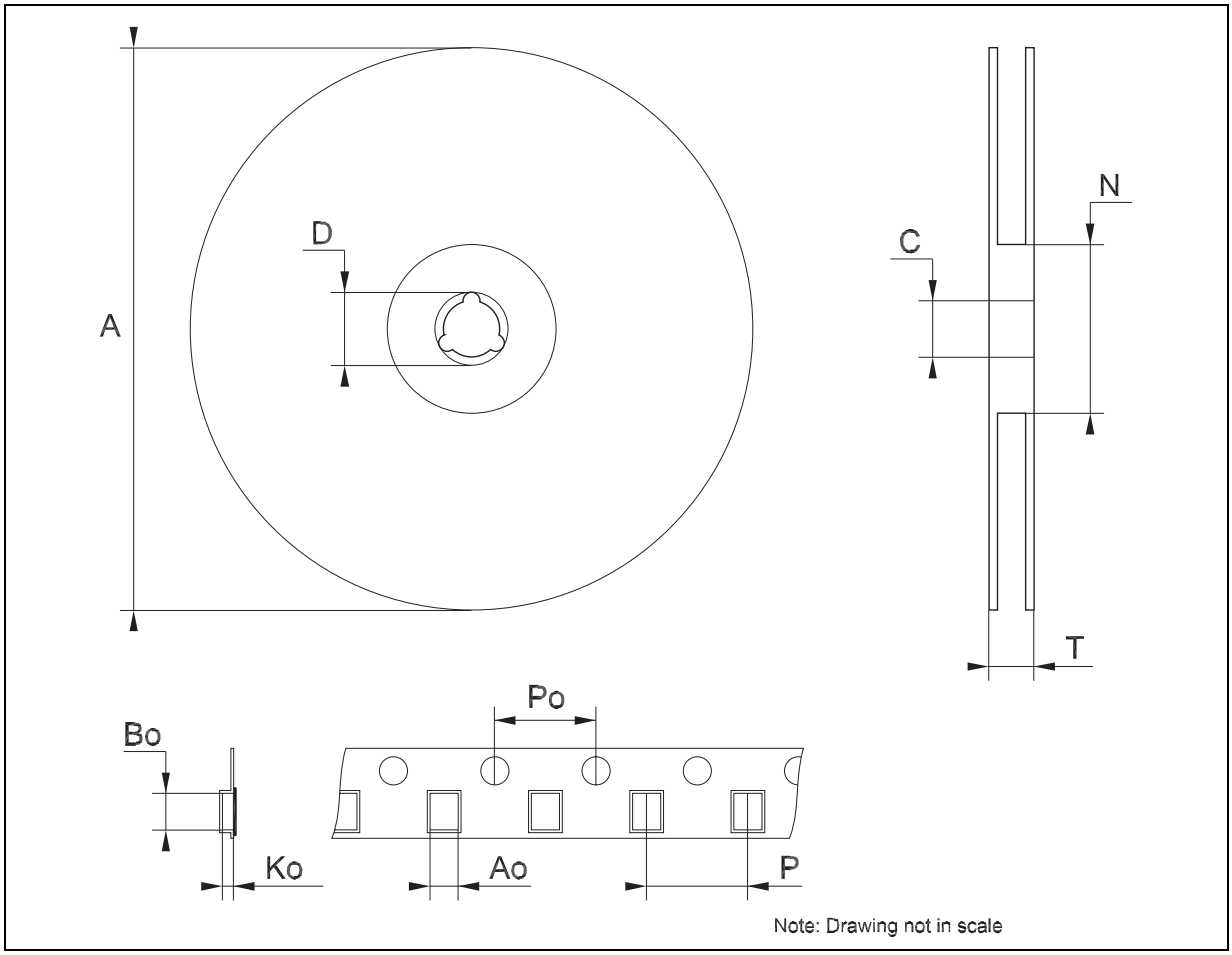
DIM.	mm.			inch		
	MIN.	TYP	MAX.	MIN.	TYP.	MAX.
A			330			12.992
C	12.8		13.2	0.504		0.519
D	20.2			0.795		
N	60			2.362		
T			22.4			0.882
Ao	8.1		8.5	0.319		0.335
Bo	5.5		5.9	0.216		0.232
Ko	2.1		2.3	0.082		0.090
Po	3.9		4.1	0.153		0.161
P	7.9		8.1	0.311		0.319



Note: Drawing not in scale

Tape & Reel DPAK-PPAK MECHANICAL DATA

DIM.	mm.			inch		
	MIN.	TYP	MAX.	MIN.	TYP.	MAX.
A			180			7.086
C	12.8	13.0	13.2	0.504	0.512	0.519
D	20.2			0.795		
N	60			2.362		
T			14.4			0.567
Ao	6.80	6.90	7.00	0.268	0.272	0.2.76
Bo	10.40	10.50	10.60	0.409	0.413	0.417
Ko	2.55	2.65	2.75	0.100	0.104	0.105
Po	3.9	4.0	4.1	0.153	0.157	0.161
P	7.9	8.0	8.1	0.311	0.315	0.319



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